AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) Lithography apparatus comprising a lithography tool housed in a first chamber, a source of radiation at or below ultra violet wavelengths housed in a second chamber connected to the first chamber to enable radiation generated by the source to be supplied to the tool, means for supplying target material to the source, ~~and~~ pump means in fluid communication with the second chamber for drawing a gaseous flow from the second chamber and conveying the drawn gaseous flow to cryogenic purification means for recovering the target material from the flow for subsequent re-supply to the source, wherein at least one of the first and second chambers is in fluid communication with a cryogenic vacuum pump, ~~the apparatus comprising~~ and a cryogenic refrigerator for supplying cryogen to the cryogenic purification means and to the ~~or each~~ cryogenic vacuum pump.

2. (Currently Amended) The ~~A~~apparatus according to ~~C~~claim 1~~,~~ wherein the at least one of the first and second chambers in fluid communication with ~~first chamber contains~~ a cryogenic vacuum pump~~.~~ is the first chamber.

3. (Currently Amended) The ~~A~~apparatus according to ~~C~~claim 1 ~~or Claim 2,~~ wherein the at least one of the first and second chambers in fluid communication with~~second chamber contains~~ a cryogenic vacuum pump~~.~~ is the second chamber.

4. (Currently Amended) The ~~A~~apparatus according to ~~any preceding~~ claim 1~~,~~ wherein the pump means comprises a transfer pump.~~, such as a turbomolecular pump.~~

5. (Currently Amended) The ~~A~~apparatus according to ~~C~~claim 4~~,~~ wherein the transfer pump has an inlet for receiving a purge gas for mixing with the drawn flow~~,~~ containing target material and wherein the cryogenic purification means is~~being~~

~~arranged~~ to receive the purge gas mixed with the drawn flow from the transfer pump and to separate the purge gas from target material contained in the drawn flow.

6. (Currently Amended) The ~~A~~apparatus according to ~~any preceding~~ claim 1~~,~~ wherein the cryogenic refrigerator is selected from the group comprise~~s~~ing ~~one of~~ an autocascade refrigerator, a Stirling engine refrigerator, a pulse-tube refrigerator and Joule-Thomson refrigerator.

7. (Currently Amended) The ~~A~~apparatus according to ~~any preceding~~ claim 1~~,~~ wherein the target material is xenon.

8. (Currently Amended) The ~~A~~apparatus according to ~~any preceding~~ claim 1~~,~~ wherein the radiation is extreme ultra violet radiation.

9. (Currently Amended) Extreme ultra violet (EUV) lithography apparatus comprising a lithography tool housed in a first chamber, a source of EUV radiation housed in a second chamber connected to the first chamber to enable EUV radiation generated by the source to be supplied to the tool, means for supplying xenon to the source, ~~and~~ pump means in fluid communication with the second chamber for drawing a gaseous flow from the second chamber and conveying the drawn gaseous flow to cryogenic purification means for recovering xenon from the flow for subsequent re-supply to the source, wherein at least one of the first and second chambers is in fluid communication with a cryogenic vacuum pump, ~~the apparatus comprising~~ and a cryogenic refrigerator for supplying cryogen to the cryogenic purification means and to the ~~or each~~ cryogenic vacuum pump.

10. (Currently Amended) Extreme ultra violet (EUV) lithography apparatus comprising a plurality of lithography tools ~~each~~ housed in a corresponding one of a~~respective~~ first chamber, at least one ~~or more~~ sources of EUV radiation ~~each~~ housed in a corresponding one of a~~respective~~ second chamber, at least one of the chambers being in fluid communication with a cryogenic vacuum pump, means for supplying xenon to at least one of the second chamber(s), means for supplying EUV radiation generated from the xenon by the source(s) to the tools, means for conveying a gaseous

flow output from at least one of the second chamber(s) to cryogenic purification means for recovering xenon from the flow for subsequent re-supply to the source(s), and a cryogenic refrigerator for supplying cryogen to the cryogenic purification means and to the ~~or each~~ cryogenic vacuum pump.

11. (Canceled)